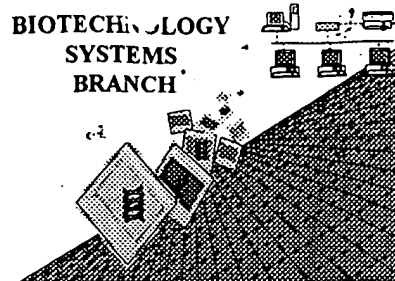


RAW SEQUENCE LISTING **ERROR REPORT**



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/910,033
Source: OLPE
Date Processed by STIC: 7/30/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

OIPE

RAW SEQUENCE LISTING

DATE: 07/30/2001

PATENT APPLICATION: US/09/910,033

TIME: 16:03:42

Input Set : A:\210212US.txt

Output Set: N:\CRF3\07302001\I910033.raw

Does Not Comply
Corrected Diskette Needed *PS*

3 <110> APPLICANT: RIEBEL, Bettina
 4 HUMMEL, Werner
 5 BOMMARIUS, Andreas
 7 <120> TITLE OF INVENTION: RECOMBINANT ENZYMES HAVING IMPROVED NAD(H) ACCEPTANCE
 9 <130> FILE REFERENCE: 210212US
 11 <140> CURRENT APPLICATION NUMBER: US/09/910,033
 11 <141> CURRENT FILING DATE: 2001-07-23
 11 <150> PRIOR APPLICATION NUMBER: DE 10037101.9
 12 <151> PRIOR FILING DATE: 2000-07-27
 14 <160> NUMBER OF SEQ ID NOS: 7
 16 <170> SOFTWARE: PatentIn version 3.1
 18 <210> SEQ ID NO: 1
 19 <211> LENGTH: 759
 20 <212> TYPE: DNA
 21 <213> ORGANISM: Lactobacillus brevis
 23 <220> FEATURE:
 24 <221> NAME/KEY: CDS
 25 <222> LOCATION: (1)..(759)
 26 <223> OTHER INFORMATION:
 29 <400> SEQUENCE: 1

30	atg tct aac cgt ttg gat ggt aag gta gca atc att aca ggt ggt acg	48
31	Met Ser Asn Arg Leu Asp Gly Lys Val Ala Ile Ile Thr Gly Gly Thr	
32	1 5 10 15	
34	ttg ggt atc ggt tta gct atc gcc acg aag ttc gtt gaa gaa ggg gct	96
35	Leu Gly Ile Gly Leu Ala Ile Ala Thr Lys Phe Val Glu Glu Gly Ala	
36	20 25 30	
38	aag gtc atg att acc gac cgg cac agc gat gtt ggt gaa aaa gca gct	144
39	Lys Val Met Ile Thr Asp Arg His Ser Asp Val Gly Glu Lys Ala Ala	
40	35 40 45	
42	aag agt gtc ggc act cct gat cag att caa ttt ttc caa cat gat tct	192
43	Lys Ser Val Gly Thr Pro Asp Gln Ile Gln Phe Phe Gln His Asp Ser	
44	50 55 60	
46	tcc gat gaa gac ggc tgg acg aaa tta ttc gat gca acg gaa aaa gcc	240
47	Ser Asp Glu Asp Gly Trp Thr Lys Leu Phe Asp Ala Thr Glu Lys Ala	
48	65 70 75 80	
50	ttt ggc cca gtt tct aca tta gtt aat aac gct ggg atc gcg gtt aac	288
51	Phe Gly Pro Val Ser Thr Leu Val Asn Asn Ala Gly Ile Ala Val Asn	
52	85 90 95	
54	aag agt gtc gaa gaa acc acg act gct gaa tgg cgt aaa tta tta gcc	336
55	Lys Ser Val Glu Thr Thr Thr Thr Ala Glu Trp Arg Lys Leu Leu Ala	
56	100 105 110	
58	gtc aac ctt gat ggt gtc ttc ttc ggt acc cga tta ggg att caa cgg	384
59	Val Asn Leu Asp Gly Val Phe Phe Gly Thr Arg Leu Gly Ile Gln Arg	
60	115 120 125	
62	atg aag aac aaa ggc tta ggg gct tcc atc atc aac atg tct tcg atc	432
63	Met Lys Asn Lys Gly Leu Gly Ala Ser Ile Ile Asn Met Ser Ser Ile	
64	130 135 140	

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/910,033

DATE: 07/30/2001

TIME: 16:03:42

Input Set : A:\210212US.txt

Output Set: N:\CRF3\07302001\I910033.raw

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66 gaa ggc ttt gtg ggt gat cct agc tta ggg gct tac aac gca tct aaa      480
67 Glu Gly Phe Val Gly Asp Pro Ser Leu Gly Ala Tyr Asn Ala Ser Lys
68 145                      150                      155                      160
70 ggg gcc gta cgg att atg tcc aag tca gct gcc tta gat tgt gcc cta      528
71 Gly Ala Val Arg Ile Met Ser Lys Ser Ala Ala Leu Asp Cys Ala Leu
72                      165                      170                      175
74 aag gac tac gat gtt cgg gta aac act gtt cac cct ggc tac atc aag      576
75 Lys Asp Tyr Asp Val Arg Val Asn Thr Val His Pro Gly Tyr Ile Lys
76                      180                      185                      190
78 aca cca ttg gtt gat gac cta cca ggg gcc gaa gaa gcg atg tca caa      624
79 Thr Pro Leu Val Asp Asp Leu Pro Gly Ala Glu Glu Ala Met Ser Gln
80                      195                      200                      205
82 cgg acc aag acg cca atg ggc cat atc ggt gaa cct aac gat att gcc      672
83 Arg Thr Lys Thr Pro Met Gly His Ile Gly Glu Pro Asn Asp Ile Ala
84                      210                      215                      220
86 tac atc tgt gtt tac ttg gct tct aac gaa tct aaa ttt gca acg ggt      720
87 Tyr Ile Cys Val Tyr Leu Ala Ser Asn Glu Ser Lys Phe Ala Thr Gly
88 225                      230                      235                      240
90 tct gaa ttc gta gtt gac ggt ggc tac act gct caa tag      759
91 Ser Glu Phe Val Val Asp Gly Gly Tyr Thr Ala Gln
92                      245                      250
95 <210> SEQ ID NO: 2
96 <211> LENGTH: 252
97 <212> TYPE: PRT
98 <213> ORGANISM: Lactobacillus brevis
100 <400> SEQUENCE: 2
102 Met Ser Asn Arg Leu Asp Gly Lys Val Ala Ile Ile Thr Gly Gly Thr
103 1                      5                      10                      15
106 Leu Gly Ile Gly Leu Ala Ile Ala Thr Lys Phe Val Glu Glu Gly Ala
107                      20                      25                      30
110 Lys Val Met Ile Thr Asp Arg His Ser Asp Val Gly Glu Lys Ala Ala
111                      35                      40                      45
114 Lys Ser Val Gly Thr Pro Asp Gln Ile Gln Phe Phe Gln His Asp Ser
115                      50                      55                      60
118 Ser Asp Glu Asp Gly Trp Thr Lys Leu Phe Asp Ala Thr Glu Lys Ala
119 65                      70                      75                      80
122 Phe Gly Pro Val Ser Thr Leu Val Asn Asn Ala Gly Ile Ala Val Asn
123                      85                      90                      95
126 Lys Ser Val Glu Glu Thr Thr Thr Ala Glu Trp Arg Lys Leu Leu Ala
127                      100                     105                     110
130 Val Asn Leu Asp Gly Val Phe Phe Gly Thr Arg Leu Gly Ile Gln Arg
131                      115                     120                     125
134 Met Lys Asn Lys Gly Leu Gly Ala Ser Ile Ile Asn Met Ser Ser Ile
135                      130                     135                     140
138 Glu Gly Phe Val Gly Asp Pro Ser Leu Gly Ala Tyr Asn Ala Ser Lys
139 145                      150                     155                     160
142 Gly Ala Val Arg Ile Met Ser Lys Ser Ala Ala Leu Asp Cys Ala Leu
143                      165                     170                     175
146 Lys Asp Tyr Asp Val Arg Val Asn Thr Val His Pro Gly Tyr Ile Lys

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/910,033

DATE: 07/30/2001

TIME: 16:03:42

Input Set : A:\210212US.txt

Output Set: N:\CRF3\07302001\I910033.raw

```

147          180          185          190
150 Thr Pro Leu Val Asp Asp Leu Pro Gly Ala Glu Glu Ala Met Ser Gln
151          195          200          205
154 Arg Thr Lys Thr Pro Met Gly His Ile Gly Glu Pro Asn Asp Ile Ala
155          210          215          220
158 Tyr Ile Cys Val Tyr Leu Ala Ser Asn Glu Ser Lys Phe Ala Thr Gly
159 225          230          235          240
162 Ser Glu Phe Val Val Asp Gly Gly Tyr Thr Ala Gln
163          245          250

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166 <210> SEQ ID NO: 3

167 <211> LENGTH: 24

168 <212> TYPE: DNA

169 <213> ORGANISM: Artificial Sequence

171 <220> FEATURE:

172 <223> OTHER INFORMATION: synthetic DNA

174 <400> SEQUENCE: 3

175 accgaccggc acagcgatgt tgggt

24

178 <210> SEQ ID NO: 4

179 <211> LENGTH: 8

180 <212> TYPE: PRT

181 <213> ORGANISM: Artificial Sequence

183 <220> FEATURE:

184 <223> OTHER INFORMATION: synthetic peptide

186 <400> SEQUENCE: 4

188 Thr Asp Arg His Ser Asp Val Gly

189 1 5

192 <210> SEQ ID NO: 5

193 <211> LENGTH: 24

194 <212> TYPE: DNA

195 <213> ORGANISM: Artificial Sequence

197 <220> FEATURE:

198 <223> OTHER INFORMATION: synthetic DNA

200 <400> SEQUENCE: 5

201 accaaccatcg ctgtgccggt cggt

24

204 <210> SEQ ID NO: 6

205 <211> LENGTH: 8

206 <212> TYPE: DNA

207 <213> ORGANISM: Artificial Sequence

209 <220> FEATURE:

210 <223> OTHER INFORMATION: synthetic peptide

212 <400> SEQUENCE: 6

213 gvdshrdt

8

216 <210> SEQ ID NO: 7

217 <211> LENGTH: 8

218 <212> TYPE: DNA

219 <213> ORGANISM: Artificial Sequence

221 <220> FEATURE:

222 <223> OTHER INFORMATION: synthetic peptide

224 <400> SEQUENCE: 7

This is not a peptide sequence.

not a peptide sequence

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/910,033

DATE: 07/30/2001

TIME: 16:03:42

Input Set : A:\210212US.txt

Output Set: N:\CRF3\07302001\I910033.raw

225 tdrhsdvg

8

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/910,033

DATE: 07/30/2001

TIME: 16:03:43

Input Set : A:\210212US.txt

Output Set: N:\CRF3\07302001\I910033.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date